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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,300	01/23/2004	Gregory A. Vogt	NOR197/02410A	8270

24118 7590 12/07/2007
HEAD, JOHNSON & KACHIGIAN
228 W 17TH PLACE
TULSA, OK 74119

EXAMINER

FRANTZ, JESSICA L

ART UNIT	PAPER NUMBER
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3746

MAIL DATE	DELIVERY MODE
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12/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/764,300	Applicant(s) VOGT ET AL.	
	Examiner Jessica L. Frantz	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2007 and 19 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Action is in response to the Amendments filed 9/10/2007 and 9/19/2007. Currently claims 1 and 5-7 are pending in this application.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02. The oath or declaration is defective because it states, "I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56 (a)." Instead, it should read as follows, --I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56.--
3. It is noted that Applicant has agreed upon notice of allowance to correct such defects.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 5 recites the limitation "wherein each drive rod" in the first line of the claim. There is insufficient antecedent basis for this limitation in the claim. NOTE: The previous recitation of the drive rods is located in the preamble and is not positively recited.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (APA) in view of Kozono et al. 4,619,472 in view of Janata 2,094,491. APA teaches that drive rod strings for use with progressive cavity pumps are well known (Written description page 3). Furthermore, APA also teaches that they typically formed by a plurality of drive rods, each rod having a pair of opposed ends, wherein each end terminates in a pin having threading and having a radially extending cylindrical shoulder and a plurality of connectors, each connector attached to one said end of a pair of drive rods, wherein each said connector has a pair of opposed threaded recesses which extend from a pair of shoulders which mate with said cylindrical shoulders of said pin (Written description pages 3-4). APA fails to teach that the pins are frustoconical shaped pins have tapered threading, wherein each rod and connectors corresponding shoulders are roughened in excess of normal or inherent roughness, and that the connectors have opposed frustoconical recesses which extend from the shoulders which mate with said frustoconical pins, and the connectors including an internal secondary-stop within said connector acting as a positive stop in each said connector for said frustoconical pin wherein said internal secondary stop is spaced from each frustoconical pin until said pin is elongated from stress. Kozono

teaches (as best shown in figure 3) connectors 43 including an internal secondary-stop (not labeled) within said connector acting as a positive stop in each said connector for said frustoconical pin 41 wherein said internal secondary stop is spaced from each frustoconical pin until said pin is elongated from stress and said internally secondary stop is normally spaced from said frustoconical pin when said pin is threaded into said recess (see figure 3) and wherein the pins are frustoconical shaped (see figure 3) having tapered threading and that the connectors have opposed frustoconical recesses (see figure 3) which extend from the shoulders which mate with said frustoconical pins. Kozono teaches this configuration for the purpose of reducing to a minimum the risk of the threaded portions from disconnecting, and to prevent the relative radial displacement sealed surfaces under various axial forces an, internally and externally exerted pressures. (Column 2, lines 50-60). Regarding the limitations requiring the shoulders of both the connectors and rods being roughened in excess of normal or inherent roughness, examiner contends that it is widely known in the art to roughen two surfaces to avoid relative movement between the two surfaces. For such an example, please refer to Janata (especially page 1, column 2, line 40-, page 2, column 1, line 13). Regarding claim 4, while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, because apparatus claims cover what a device is, not what a device does (Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)). Thus, if a prior art structure is capable of performing the intended use as recited in the preamble, or elsewhere in a claim, then

it meets the claim. Therefore, as the structure of APA in view of Kozono and Janata is capable of performing as claimed, it meets the limitations of the claim. The combination of APA in view of Kozono in view of Janata also teaches the method of claim 7. APA discusses the steps of positioning a progressive cavity device down hole, in a well by attaching a drive rod string to the device and rotating said drive rod string to power said progressive cavity device (Written description pages 2-4) and the combination of APA in view of Kozono and Janata teaches the structure of the drive rod string as discussed above. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included the structure of Kozono and Janata for the purpose of reducing to a minimum the risk of the threaded portions from disconnecting, and to prevent the relative radial displacement sealed surfaces under various axial forces an, internally and externally exerted pressures. (Kozono - Column 2, lines 50-60) and to roughen two surfaces to avoid relative movement between the two surfaces (Janata - especially page 1, column 2, line 40-, page 2, column 1, line 13).

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (APA) in view of Kozono et al. 4,619,472 in view of Janata 2,094,491 and further in view of Kaiser et al WO 98/42945. APA in view of Kozono and Janata teaches the invention as claimed but fails to teach the following claimed limitations as taught by Kaiser: substantially no undercut 26 between the tapered threading 20 and the shoulder 18 of the pin for the purpose of maximizing efficiency of the connections for use in progressive cavity driven pumps (rotational movement) (Kaiser pages 2-3). Therefore, it would have been obvious to one of ordinary skill in the

art at the time of the invention to have included a small undercut for the purpose of maximizing efficiency of the connections for use in progressive cavity driven pumps (rotational movement) (Kaiser pages 2-3).

Response to Arguments

9. Applicant's arguments with respect to claims 1 and 4-7 have been considered but are moot in view of the new ground(s) of rejection.

10. This Action is made NON-FINAL.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Jewett 5,031,370
- b. Geary 5,015,017
- c. MacArthur 2,532,632
- d. Hill 2,021,184
- e. Gignoux 2,161,568

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica L. Frantz whose telephone number is 571-272-5822. The examiner can normally be reached on Monday through Friday 8:30a.m.-5:00p.m. E.S.T..

Application/Control Number:
10/764,300
Art Unit: 3746

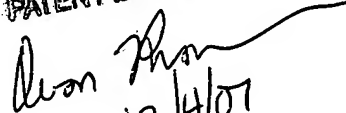
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


JF

DEVON C. KRAMER
PATENT EXAMINER


12/4/07